

Claim 43, line 3, after "pCR1" change the comma "," to --and--, and delete "and pSC1".

Claim 44, line 4, delete "at least".

Claim 45, line 4, delete "at least";

line 9 of the sequence, change "Ais" to --His--.

Please add the following new Claims 49 to 59.

Subst.
E
--49. A recombinant expression plasmid for producing human fibroblast β_1 interferon, comprising a DNA sequence coding for human fibroblast β_1 interferon, whereby expression of human fibroblast β_1 interferon by a host is enabled.

C
E
50. A recombinant expression plasmid for producing human fibroblast β_1 interferon polypeptide in a host, comprising a DNA sequence coding for human fibroblast β_1 interferon operably linked therein for expression.

27 An Escherichia coli
51. A host cell capable of expressing human fibroblast β_1 interferon polypeptide, transformed with an expression plasmid of claim 49.

52. A method of producing human fibroblast β_1 interferon polypeptide, comprising expressing the expression plasmid of claim 49 in a host cell.

53. A human fibroblast β_1 interferon polypeptide produced by the process of claim 52.

54. Recombinant human ~~E~~ Fibroblast β_1 interferon.

31
55. A plasmid of claim ~~49~~^{26/46}, wherein said DNA has the sequence:

T310X
E

ATG ACC AAC AAG TGT CTC CTC CAA ATT GCT CTC CTG TTG TGC TTC TCC
TAC TGG TTG TTC ACA GAG GAG GTT TAA CGA GAG GAC AAC ACG AAG AGG

ACT ACA GCT CTT TCC ATG AGC TAC AAC TTG CTT GGA TTC CTA CAA AGA
TGA TGT CGA GAA AGG TAC TCG ATG TTG AAC GAA CCT AAG ~~CAT~~^G GTT TCT

AGC AGC AAT TTT CAG TGT CAG AAG CTC CTG TGG CAA TTG AAT GGG AGG
TCG TCG TTA AAA GTC ACA GTC TTC GAG GAC ACC GTT AAC TTA CCC TCC

CTT GAA TAT TGC CTC AAG GAC AGG ATG AAC TTT GAC ATC CCT GAG GAG
GAA CTT ATA ACG GAG TTC CTG TCC TAC TTG AAA CTG TAG GGA CTC CTC

ATT AAG CAG CTG CAG CAG TTC CAG AAG GAG GAC GCC GCA TTG ACC ATC
TAA TTC GTC GAC GTC GTC AAG GTC TTC CTC CTG CGG CGT AAC TGG TAG

TAT GAG ATG CTC CAG AAC ATC TTT GCT ATT TTC AGA CAA GAT TCA TCT
ATA CTC TAC GAG GTC TTG TAG AAA CGA TAA AAG TCT GTT CTA AGT AGA

AGC ACT GGC TGG AAT GAG ACT ATT GTT GAG AAC CTC CTG GCT AAT GTC
TCG TGA CCG ACC TTA CTC TGA TAA CAA CTC TTG GAG GAC CGA TTA CAG

TAT CAT CAG ATA AAC CAT CTG AAG ACA GTC CTG GAA GAA AAA CTG GAG
ATA GTA GTC TAT TTG GTA GAC TTC TGT CAG GAC CTT CTT TTT GAC CTC

AAA GAA GAT TTC ACC AGG GGA AAA CTC ATG AGC AGT CTG CAC CTG AAA
TTT CTT CTA AAG TGG TCC CCT TTT GAG TAC TCG TCA GAC GTG GAC TTT

AGA TAT TAT GGG AGG ATT CTG CAT TAC CTG AAG GCC AAG GAG TAC AGT
TCT ATA ATA CCC TCC TAA GAC GTA ATG GAC TTC CGG TTC CTC ATG TCA

CAC TGT GCC TGG ACC ATA GTC AGA GTG GAA ATC CTA AGG AAC TTT TAC
GTG ACA CGG ACC TGG TAT CAG TCT CAC CTT TAG GAT TCC TTG AAA ATG

TTC ATT AAC AGA CTT ACA GGT TAC CTC CGA AAC
AAG TAA TTG TCT GAA TGT CCA ATG GAG GCT TTG.

C1
Cont

56. ⁵⁷⁸ An *Escherichia coli* host ¹²⁷ host cell of claim 51, wherein said DNA has the

E

sequence:

T311X

ATG ACC AAC AAG TGT CTC CTC CAA ATT GCT CTC CTG TTG TGC TTC TCC
TAC TGG TTG TTC ACA GAG GAG GTT TAA CGA GAG GAC AAC ACG AAG AGG

E

ACT	ACA	GCT	CTT	TCC	ATG	AGC	TAC	AAC	TTG	CTT	GGA	TTC	CTA	CAA	AGA
TGA	TGT	CGA	GAA	AGG	TAC	TCG	ATG	TTG	AAC	GAA	CCT	AAG	GAT G	GTT	TCT
AGC	AGC	AAT	TTT	CAG	TGT	CAG	AAG	CTC	CTG	TGG	CAA	TTG	AAT	GGG	AGG
TCG	TCG	TTA	AAA	GTC	ACA	GTC	TTC	GAG	GAC	ACC	GTT	AAC	TTA	CCC	TCC
CTT	GAA	TAT	TGC	CTC	AAG	GAC	AGG	ATG	AAC	TTT	GAC	ATC	CCT	GAG	GAG
GAA	CTT	ATA	ACG	GAG	TTC	CTG	TCC	TAC	TTG	AAA	CTG	TAG	GGA	CTC	CTC
ATT	AAG	CAG	CTG	CAG	CAG	TTC	CAG	AAG	GAG	GAC	GCC	GCA	TTG	ACC	ATC
TAA	TTC	GTC	GAC	GTC	GTC	AAG	GTC	TTC	CTC	CTG	CGG	CGT	AAC	TGG	TAG
TAT	GAG	ATG	CTC	CAG	AAC	ATC	TTT	GCT	ATT	TTC	AGA	CAA	GAT	TCA	TCT
ATA	CTC	TAC	GAG	GTC	TTG	TAG	AAA	CGA	TAA	AAG	TCT	GTT	CTA	AGT	AGA
AGC	ACT	GGC	TGG	AAT	GAG	ACT	ATT	GTT	GAG	AAC	CTC	CTG	GCT	AAT	GTC
TCG	TGA	CCG	ACC	TTA	CTC	TGA	TAA	CAA	CTC	TTG	GAG	GAC	CGA	TTA	CAG
TAT	CAT	CAG	ATA	AAC	CAT	CTG	AAG	ACA	GTC	CTG	GAA	GAA	AAA	CTG	GAG
ATA	GTA	GTC	TAT	TTG	GTA	GAC	TTC	TGT	CAG	GAC	CTT	CTT	TTT	GAC	CTC
AAA	GAA	GAT	TTC	ACC	AGG	GGA	AAA	CTC	ATG	AGC	AGT	CTG	CAC	CTG	AAA
TTT	CTT	CTA	AAG	TGG	TCC	CCT	TTT	GAG	TAC	TCG	TCA	GAC	GTG	GAC	TTT
AGA	TAT	TAT	GGG	AGG	ATT	CTG	CAT	TAC	CTG	AAG	GCC	AAG	GAG	TAC	AGT
TCT	ATA	ATA	CCC	TCC	TAA	GAC	GTA	ATG	GAC	TTC	CGG	TTC	CTC	ATG	TCA
CAC	TGT	GCC	TGG	ACC	ATA	GTC	AGA	GTG	GAA	ATC	CTA	AGG	AAC	TTT	TAC
GTG	ACA	CGG	ACC	TGG	TAT	CAG	TCT	CAC	CTT	TAG	GAT	TCC	TTG	AAA	ATG
TTC	ATT	AAC	AGA	CTT	ACA	GGT	TAC	CTC	CGA	AAC					
AAG	TAA	TTG	TCT	GAA	TGT	CCA	ATG	GAG	GCT	TTG					

C1
cont

57⁵⁰. A method of claim 52,²⁹ wherein said DNA has the sequence:

T320

ATG	ACC	AAC	AAG	TGT	CTC	CTC	CAA	ATT	GCT	CTC	CTG	TTG	TGC	TTC	TCC
TAC	TGG	TTG	TTC	ACA	GAG	GAG	GTT	TAA	CGA	GAG	GAC	AAC	ACG	AAG	AGG
ACT	ACA	GCT	CTT	TCC	ATG	AGC	TAC	AAC	TTG	CTT	GGA	TTC	CTA	CAA	AGA
TGA	TGT	CGA	GAA	AGG	TAC	TCG	ATG	TTG	AAC	GAA	CCT	AAG	GAT G	GTT	TCT
AGC	AGC	AAT	TTT	CAG	TGT	CAG	AAG	CTC	CTG	TGG	CAA	TTG	AAT	GGG	AGG
TCG	TCG	TTA	AAA	GTC	ACA	GTC	TTC	GAG	GAC	ACC	GTT	AAC	TTA	CCC	TCC
CTT	GAA	TAT	TGC	CTC	AAG	GAC	AGG	ATG	AAC	TTT	GAC	ATC	CCT	GAG	GAG
GAA	CTT	ATA	ACG	GAG	TTC	CTG	TCC	TAC	TTG	AAA	CTG	TAG	GGA	CTC	CTC
ATT	AAG	CAG	CTG	CAG	CAG	TTC	CAG	AAG	GAG	GAC	GCC	GCA	TTG	ACC	ATC

E

TAA TTC GTC GAC GTC GTC AAG GTC TTC CTC CTG CGG CGT AAC TGG TAG
 TAT GAG ATG CTC CAG AAC ATC TTT GCT ATT TTC AGA CAA GAT TCA TCT
 ATA CTC TAC GAG GTC TTG TAG AAA CGA TAA AAG TCT GTT CTA AGT AGA
 AGC ACT GGC TGG AAT GAG ACT ATT GTT GAG AAC CTC CTG GCT AAT GTC
 TCG TGA CCG ACC TTA CTC TGA TAA CAA CTC TTG GAG GAC CGA TTA CAG
 TAT CAT CAG ATA AAC CAT CTG AAG ACA GTC CTG GAA GAA AAA CTG GAG
 ATA GTA GTC TAT TTG GTA GAC TTC TGT CAG GAC CTT CTT TTT GAC CTC
 AAA GAA GAT TTC ACC AGG GGA AAA CTC ATG AGC AGT CTG CAC CTG AAA
 TTT CTT CTA AAG TGG TCC CCT TTT GAG TAC TCG TCA GAC GTG GAC TTT
 AGA TAT TAT GGG AGG ATT CTG CAT TAC CTG AAG GCC AAG GAG TAC AGT
 TCT ATA ATA CCC TCC TAA GAC GTA ATG GAC TTC CGG TTC CTC ATG TCA
 CAC TGT GCC TGG ACC ATA GTC AGA GTG GAA ATC CTA AGG AAC TTT TAC
 GTG ACA CGG ACC TGG TAT CAG TCT CAC CTT TAG GAT TCC TTG AAA ATG
 TTC ATT AAC AGA CTT ACA GGT TAC CTC CGA AAC
 AAG TAA TTG TCT GAA TGT CCA ATG GAG GCT TTG.

58. Recombinant human fibroblast β_1 interferon having
 the amino acid sequence:

Met Ser Tyr Asn Leu Leu Gly Phe Leu Gln Arg Ser Ser Asn Phe Gln
 Cys Gln Lys Leu Leu Trp Gln Leu Asn Gly Arg Leu Glu Tyr Cys Leu
 Lys Asp Arg Met Asn Phe Asp Ile Pro Glu Glu Ile Lys Gln Leu Gln
 Gln Phe Gln Lys Glu Asp Ala Ala Leu Thr Ile Tyr Glu Met Leu Gln
 Asn Ile Phe Ala Ile Phe Arg Gln Asp Ser Ser Ser Thr Gly Trp Asn
 Glu Thr Ile Val Glu Asn Leu Leu Ala Asn Val Tyr His Gln Ile Asn
 His Leu Lys Thr Val Leu Glu Glu Lys Leu Glu Lys Glu Asp Phe Thr
 Arg Gly Lys Leu Met Ser Ser Leu His Leu Lys Arg Tyr Tyr Gly Arg
 Ile Leu His Tyr Leu Lys Ala Lys Glu Tyr Ser His Cys Ala Trp Thr
 Ile Val Arg Val Glu Ile Leu Arg Asn Phe Tyr Phe Ile Asn Arg Leu
 Thr Gly Tyr Leu Arg Asn.

59. Recombinant human fibroblast β_1 interferon having the amino acid sequence:

Met Thr Asn Lys Cys Leu Leu Gln Ile Ala Leu Leu Leu Cys Phe Ser
Thr Thr Ala Leu Ser Met Ser Tyr Asn Leu Leu Gly Phe Leu Gln Arg
Ser Ser Asn Phe Gln Cys Gln Lys Leu Leu Trp Gln Leu Asn Gly Arg
Leu Glu Tyr Cys Leu Lys Asp Arg Met Asn Phe Asp Ile Pro Glu Glu
Ile Lys Gln Leu Gln Gln Phe Gln Lys Glu Asp Ala Ala Leu Thr Ile
Tyr Glu Met Leu Gln Asn Ile Phe Ala Ile Phe Arg Gln Asp Ser Ser
Ser Thr Gly Trp Asn Glu Thr Ile Val Glu Asn Leu Leu Ala Asn Val
Tyr His Gln Ile Asn His Leu Lys Thr Val Leu Glu Glu Lys Leu Glu
Lys Glu Asp Phe Thr Arg Gly Lys Leu Met Ser Ser Leu His Leu Lys
Arg Tyr Tyr Gly Arg Ile Leu His Tyr Leu Lys Ala Lys Glu Tyr Ser
His Cys Ala Trp Thr Ile Val Arg Val Glu Ile Leu Arg Asn Phe Tyr
Phe Ile Asn Arg Leu Thr Gly Tyr Leu Arg Asn. --

C1
concl'd

REMARKS

The specification has been amended to conform to the amendments made in Applicants' parent application Serial No. 06/201,359. The claims have also been amended to define Applicants' invention with the particularity required by statute and to set forth the invention in such manner as to clearly demonstrate its patentability. Additionally, new claims 49-59 are submitted herewith to